



Spring 1971

COURSE DESCRIPTIONS and CURRICULA



a door to your future...

Northern Essex Community College
HAVERHILL • MASSACHUSETTS



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THE ASSOCIATE IN ARTS DEGREE - LIBERAL ARTS

The Liberal Arts Program is a transfer curriculum designed for students planning to continue their education at a four-year college or university. To broaden their educational base, students are required to take courses in communications and the sciences. Intermediate competency in a modern foreign language, and two years of natural science are mandatory. The course also includes seminars and the preparation of research papers. Counselors will help the student select electives leading to major and minor sequences in their chosen fields of specialization.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Finite Mathematics I	3
Science	4
Foreign Language	3
Social Science	3
	<u>16</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
*Mathematics	3
Science	4
Foreign Language	3
Social Science	3
	<u>16</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Literature	3
Science	4
Foreign Language	3
Social Science	3
Elective	3
	<u>16</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Literature	3
Science	4
Foreign Language	3
Social Science	3
Elective	3
	<u>16</u>

*One of the following: Finite Mathematics II, Statistics, Elementary Functions

PREREQUISITES Four years of high school English
FOR ADMISSION Two years of a modern foreign language
 Two years of algebra
 One year of a laboratory science

THE ASSOCIATE IN ARTS DEGREE - GENERAL LIBERAL ARTS

The General Liberal Arts Program is designed for the student who has not yet decided upon the educational objectives best suited to his interests and potential. Maximum elective choice enables the student to explore different areas, and to spend more time discovering his abilities. One year of science is required. Students in this curriculum should consult regularly with counselors to assess and evaluate the electives selected.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Finite Mathematics I	3
Science	4
Social Science	3
Elective	3
	<u>16</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
*Mathematics	3
Science	4
Social Science	3
Elective	3
	<u>16</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Literature	3
Social Science	3
Elective	3
Speech	3
Elective	3
	<u>15</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Literature	3
Social Science	3
Elective	3
Elective	3
Elective	3
	<u>15</u>

* One of the following: Finite Mathematics II, Statistics, Elementary Functions

PREREQUISITES Four years of high school English
FOR ADMISSION Two years of algebra
 One year of a laboratory science

THE ASSOCIATE IN SCIENCE DEGREE - ENGINEERING SCIENCE

The Engineering Science Program is designed to prepare the engineering student for transfer to a four-year college or university. This core curriculum has been developed in cooperation with the American Association for Engineering Education, and the engineering divisions of several four-year institutions. The core curriculum allows the student the opportunity to explore various engineering fields, and equips him to choose the field of specialization best suited to his interests and abilities. The engineering fields include Chemical, Civil, Electrical, Industrial and Mechanical Engineering. A strong background in mathematics is required.

FIRST SEMESTER

<u>COURSE</u>	<u>Credit</u>
English Composition I	3
Advanced Trigonometry and Analytic Geometry	4
Elective (Liberal Arts)	3
Chemistry I	4
Speech	3
	<u>17</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Calculus I	4
Graphics	2
Engineering Physics I	4
Chemistry II	4
	<u>17</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Calculus II	4
Engineering Mechanics I	3
Engineering Physics	4
Literature	3
Networks I	4
	<u>18</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Differential Equations	4
Engineering Mechanics II	3
Engineering Physics III	4
Literature	3
Networks II	4
	<u>18</u>

PREREQUISITES Two years of algebra
FOR ADMISSION Geometry
 Trigonometry
 Physics or Chemistry

THE ASSOCIATE IN SCIENCE DEGREE
ACCOUNTING-BUSINESS MANAGEMENT-BUSINESS TRANSFER

Curricula in Accounting, Business Management and Business Transfer are offered in the Department of Business. The first two semesters in all three programs are identical. This first year provides a core of basic business and liberal arts courses. The purpose of the core curriculum is to introduce the student to broad areas of business and enable him to choose the particular business specialization best suited to his needs and abilities; and to expand his general knowledge and understanding through selected liberal arts requirements.

CORE CURRICULUM

FIRST SEMESTER

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>	<u>Course</u>	<u>Credit</u>
English Composition I	3	English Composition II	3
Introductory Accounting I	3	Introductory Accounting II	3
*Mathematics of Finance	3	*Business Statistics	3
Principles of Marketing	3	Speech	3
Principles of Sociology		Introduction to Psychology	
or		or	
Introduction to Psychology	3	Principles of Sociology	3
	15		15

* A liberal arts mathematics course should be elected in place of Mathematics of Finance and Business Statistics by students who qualify.

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After successfully completing the courses in the core curriculum, students may decide on a business program for the third and fourth semesters. When a program offers a wide choice of Business Electives, the student should select courses carefully, to build a strong background in a particular business field.

BUSINESS AREAS

The ACCOUNTING PROGRAM is designed to prepare the student to enter business, industry and government in the specialized field of accounting.

THIRD SEMESTER

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>	<u>Course</u>	<u>Credit</u>
Business Finance	3	Survey of Economics	3
Business Law	3	Personnel Management	3
Intermediate Accounting I	3	Intermediate Accounting II	3
Cost Accounting	3	Tax Accounting	3
*Man and His Environment	3	Elective (Liberal Arts)	3
	15		15

* Another science course may be elected in place of this requirement.

THE BUSINESS MANAGEMENT PROGRAM will quality graduates to enter business and industry in any of several areas. Via the choice of business electives, the student may direct his interest toward marketing, retailing, insurance, real estate or industrial management.

THIRD SEMESTER

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>	<u>Course</u>	<u>Credit</u>
Business Finance	3	Survey of Economics	3
Business Law	3	Personnel Management	3
Business Elective	3	Business Elective	3
Business Elective	3	Business Elective	3
Elective (Liberal Arts)	3	*Man and His Environment	3
	<u>15</u>		<u>15</u>

*Another science course may be elected in place of this requirement.

The Business Electives

Advertising	Principles of Real Estate
Credits and Collections	Tax Accounting
Retailing	Cost Accounting
Salesmanship	Industrial Management
Business Law II	Managerial Accounting
Principles of Insurance	Time and Motion Study
Introduction to Data Processing	

THE BUSINESS TRANSFER PROGRAM is designed for students who plan to transfer to a four-year institution after completing the associate degree program. Students who enroll in the Business Transfer Program must have demonstrated academic ability in the first two semesters, must be recommended by the Chairman of the Department of Business, and must be approved by the Dean of Students.

THIRD SEMESTER

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>	<u>Course</u>	<u>Credit</u>
Principles of Economics I	3	Principles of Economics II	3
Natural Science	4	Natural Science	4
*Elective (Liberal Arts)	3	*Elective (Liberal Arts)	3
*Elective (Liberal Arts)	3	*Elective (Liberal Arts)	3
*Elective (Liberal Arts)	3	*Elective (Liberal Arts)	3
	<u>16</u>		<u>16</u>

*Electives should be chosen to fulfill the transfer requirements of the particular four-year institution the student plans to attend.

THE ASSOCIATE IN ARTS DEGREE - EXECUTIVE SECRETARIAL

The Executive Secretarial Program is designed to help students develop superior secretarial skills and abilities in business decision-making and problem-solving activities. The course includes liberal arts subjects, business courses, and secretarial science courses. Courses in secretarial skills are given at different levels to accomodate students with differing backgrounds. There is opportunity for periodic appraisal and readjustment in classes. Subject matter in classes in shorthand, business machines and secretarial procedures is integrated. Business tours, field trips, and demonstrations of innovations in office equipment are available.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Typewriting I or II	3
Shorthand I	3
Mathematics of Business	3
Elective	3
	<u>15</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Typewriting II or III	3
Shorthand II	3
Speech	3
Elective	3
	<u>15</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Introductory Accounting	3
Shorthand & Transcription I	3
Secretarial Procedures I	3
Office Machines	3
Elective	3
	<u>15</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Introductory Accounting	3
II	
or Advanced Sec'l	
Accounting	3
Shorthand & Transcription II	3
Secretarial Procedures	
II	3
Elective	3
Elective	3
	<u>15</u>

PREREQUISITES FOR ADMISSION Sufficient college-preparation courses to enable the student to achieve success in the liberal arts courses required in the program.

THE ASSOCIATE IN SCIENCE DEGREE - ELECTRONIC TECHNOLOGY

The Electronic Technology Program is designed primarily to equip the student for employment (often as an Engineering Assistant) with immediately marketable skills in electronic technology. The curriculum concentrates on the development of complex, interdependent electronic techniques. Heavy emphasis is placed on the use of state-of-the-art devices, laboratory equipment, and the preparation of complete, analytical laboratory reports. A film program and field trips are included in the course. Recently, Bachelor of Arts in Technology programs have been developed nation-wide, and students who plan to continue their education at a four-year institution should consider these new programs.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition	3
Algebra and Trigonometry	4
Graphics	2
Applied Physics I	4
D.C. Circuits	4
	<u>17</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Advanced Algebra and Trigonometry	4
Applied Physics II	4
A.C. Circuits	4
Elective	3
	<u>18</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Advanced Technical Mathematics I	4
Semiconductors	4
Electronics I	5
Advanced Circuits	4
Elective (Liberal Arts)	3
	<u>20</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Advanced Technical Mathematics II	3
Electronics II	5
Electrical Measurements	4
Applied Industrial Electronics	4
Elective (Liberal Arts)	3
	<u>19</u>

PREREQUISITES Four years of high school English
FOR ADMISSION Two years of algebra

THE ASSOCIATE IN SCIENCE DEGREE - COMPUTER TECHNOLOGY

The Computer Technology Program is designed primarily to prepare the student for employment opportunities with immediately marketable skills in data processing. Graduates have entered varied areas of computer technology, including programming, system analysis training programs and data processing management. The curriculum is based almost entirely on various skill techniques which are interdependent in their development and which are based on a strong background in mathematics, accounting and communication. The course includes field trips to computer installations. The College's computer facilities are used extensively for work shops. The program has transfer potential to four-year institutions, and students who plan to continue their education beyond the associate degree level should select their electives to fulfill the requirements for transfer of the four-year institutions they choose.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Finite Mathematical Models I	3
Introductory Accounting I	3
Fundamentals of Digital Logic	3
Business Programming I	4
	<u>16</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Finite Mathematical Models II	3
Introductory Accounting II	3
Speech	3
Scientific Programming	4
	<u>16</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Introduction to Statistics	3
Technical Writing	3
Elective	3
Assembly Programming	4
Elective (Liberal Arts)	3
	<u>16</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Elective	3
Business Programming II	4
Systems Development and Design	4
Advanced Programming	4
Elective (Liberal Arts)	3
	<u>18</u>

PREREQUISITES Two years of algebra
FOR ADMISSION

THE ASSOCIATE IN SCIENCE DEGREE - NURSING

The Nursing Program is designed to provide sound training in nursing theory and nursing skills. Clinical instruction, and experience in affiliated hospitals, follows the highest national and state standards for excellence. Liberal arts courses are included to develop the best potential of the student. Graduates are prepared to write the Massachusetts State Licensing Examinations for qualification as registered nurses. Both male and female applicants, married or single, are considered for this program. Satisfactory performance must be required in all nursing and laboratory courses.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
Nursing I	7
Anatomy & Physiology I	4
English Composition I	3
Introduction to Psychology	3
	<u>17</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
Nursing II	7
Anatomy & Physiology II	4
English Composition II	3
Marriage & the Family	3
	<u>17</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Nursing III	8
Principles of Sociology	3
Speech	3
Microbiology	4
	<u>18</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Nursing IV	10
Seminar on Nursing	3
Elective (Social Science)	3
	<u>16</u>

PREREQUISITES FOR ADMISSION

Four years of high school English
Two years of science (one must be a laboratory course in chemistry)
Two years of mathematics (at least one year of algebra)
Two years of social science

THE ASSOCIATE IN SCIENCE DEGREE - NURSING HOME and SMALL
HOSPITAL ADMINISTRATION

The Nursing Home and Small Hospital Administration Program prepares the student with skills in the various aspects of institutional management including finance, facilities and equipment, planning and construction, services, health standards and record keeping. The development of a comprehensive view of health care, and an understanding of the role of the nursing home in society, is emphasized. The course includes the internship period in an approved institution.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Introductory Accounting I	3
Principles of Economics	3
Introduction to Psychology	3
Principles of Nursing Home Administration I	3
	<u>15</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Introductory Accounting II	3
Speech	3
Food Services and Nutrition	3
Mathematics of Finance	3
	<u>15</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Nursing Home Plant Planning	3
Business Law I	3
Office Machines	3
Gerontology	3
Biology	4
	<u>16</u>

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Personnel Management	3
Medico-legal Standards	3
Internship (Administration)	4
Principles of Nursing Home Finance	3
	<u>16</u>

THE ASSOCIATE IN SCIENCE DEGREE - MEDICAL RECORD TECHNOLOGY

The Medical Record Technology Program provides the student with the skills and techniques required to enter the administrative areas of the health professions. The curriculum provides a wide opportunity for intellectual development through electives. The technical courses emphasize the preparation, maintenance and analysis of medical reports, records and studies. Graduates are prepared to write an examination for national accreditation. Students who wish to continue their education in a four-year institution should select electives which fill the transfer requirements of the institution of their choice.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Anatomy & Physiology I	4
Medical Terminology	3
Medical Record Science I	3
*Typing I or Elective	3
	<u>16</u>

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Anatomy & Physiology II	4
Medical Record Science II	3
Directed Practice I	2
***Group B Elective	3
	<u>15</u>

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Medical Record Science III	3
Directed Practice II	4
Social Science	3
Elective (Liberal Arts)	3
**Group A Elective	3
	<u>16</u>

<u>Course</u>	<u>Credit</u>
Medical Record Seminar	1
Directed Practice III	4
***Group B Elective	3
**Group A Elective	3
Elective (Liberal Arts)	3
Elective	3
	<u>17</u>

* Students able to type 45 WPM will be exempt from Typing I.

** GROUP A ELECTIVES

Select one course from each of the following two groups:

-Personnel Management
-Time and Motion Study

-Basic Computing Machines
-Introduction to Data Processing

*** GROUP B ELECTIVES

Select two course from one of the following two groups (introductory courses should be taken during the first year):

-Introduction to Psychology-Principles of Sociology
-Social Psychology -Contemporary Social Problems

THE ASSOCIATE IN SCIENCE DEGREE - INHALATION THERAPY TECHNOLOGY

The Inhalation Therapy Technology Program provides theoretical background and practical skills in the application, under medical supervision, of inhalation therapy to patients; and in the use and the maintenance of inhalation therapy equipment. Clinical experience is provided by the use of the equipment and organizational facilities of affiliated hospitals. Students who successfully complete this program are prepared to sit for the examination administered by the American Association for Inhalation Therapy for registration as Registered Inhalation Therapists.

FIRST SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition I	3
Finite Mathematics I	3
Integrated Science I	4
Introduction to Psychology	3
Respiratory Therapy I	<u>3</u>
	16

SECOND SEMESTER

<u>Course</u>	<u>Credit</u>
English Composition II	3
Elective (Liberal Arts)	3
Integrated Science II	4
Elective (Liberal Arts)	3
Respiratory Therapy II	<u>3</u>
	16

SUMMER SESSION

Required ten-week term of clinical experience, under medical supervision, as employee of affiliate hospital.

THIRD SEMESTER

<u>Course</u>	<u>Credit</u>
Respiratory Therapy III	4
Respiratory Physiology	3
pH and Blood Gas Analysis	3
Seminar I	3
Elective (Liberal Arts)	<u>3</u>
	16

FOURTH SEMESTER

<u>Course</u>	<u>Credit</u>
Respiratory Therapy IV	4
Clinical Spirometry	3
Respiratory Intensive Care	4
Seminar II	3
Elective (Liberal Arts)	<u>3</u>
	17

<u>COURSE DESCRIPTIONS</u>

AC6601 Introductory Accounting I

A one-semester course; three credit hours. The basic concepts of accounting and uses of accounting data. Topics include the theory of debit and credit, use of journals and ledgers, analysis and recording of financial transactions, the accounting cycle, deferrals, accruals, inventories, fixed assets, voucher system and payroll. Four class hours per week.

AC6602 Introductory Accounting II

A one-semester course; three credit hours. A continuation of AC6601. Emphasis on accounting for partnerships, corporations, basic cost accounting and cost relationships, and special reports and statements. Four class hours per week.

Prerequisite: AC6601

AC6651 Intermediate Accounting II

A one-semester course; three credit hours. The detailed study of accounting theory and practice as it pertains to the accounting process, cash, receivables, inventories and current liabilities. Three class hours per week.

Prerequisite: AC6602

AC6652 Intermediate Accounting II

A one-semester course; three credit hours. A continuation of accounting with emphasis on non-current assets and liabilities, stockholders equity, and various statements. Three class hours per week.

Prerequisite: AC6651

AC6661 Managerial Accounting

A one-semester course; three credit hours. A study of the analysis of accounting data, rather than the collecting and recording function. The use of accounting as a basis for managerial supervision and planning. Three class hours per week.

Prerequisite: AC6602

Courses offered by the Division of Continuing Education.

AC6671 Cost Accounting

A one-semester course; three credit hours. An intensive study of cost methods. Costing for materials, labor and factory overhead. Job-order process, direct costing and the use of standards. Three class hours per week.

Prerequisite: AC6602

AC6682 Tax Accounting

A one-semester course; three credit hours. An introduction to the principles of federal taxation with emphasis on history of income taxation, gross income, deductions, exemptions, accounting records, preparation and filing of tax returns. Three class hours per week.

Prerequisite: AC6602

BI5511 Botany

A one-semester course; four credit hours. An introductory biology course based on the study of plants. The lectures include a gross and microscopic survey of plant anatomy from algae to the higher vascular plants noting the evolutionary trends, their economic relationship with man, and the fundamentals of physiology and morphology of the higher vascular plants. Three one-hour lectures and one two-hour laboratory period per week.

Prerequisite: A high school biology course and/or permission of the instructor.

BI5513 Invertebrate Zoology

A one-semester course; four credit hours. An introductory biology course oriented to invertebrate animals. The relation of the invertebrate animals to their environment and to man as indicated by their structure, physiology, natural history and evolution. Field trips and laboratory work emphasize identification and structural forms of the nearby lakes and ocean. Three one-hour lectures and one two-hour laboratory period per week.

Prerequisite: A high school biology course and/or permission of the instructor.

Vertebrate Zoology

A one-semester course; four credit hours. An introductory biology course oriented to vertebrate animals. A study of the vertebrate animals in relation to their structure, adaptations, evolution, and natural history. Their relationships to the lower animals and to man. Three one-hour lectures and one two-hour laboratory period per week.

Prerequisite: A high school biology course and/or permission of the instructor.

BI5519 Anatomy and Physiology I

A one-semester course; four credit hours. Human anatomical structures and physiological systems will be studied. Emphasis will be placed on the interrelationships between the systems. Related topics such as physical abnormalities and diseases of the systems will be integrated where possible. Laboratory work will include experiments, dissection, microscope work and the study of charts and models. Three one-hour lectures and one two-hour laboratory period per week.

BI5520 Anatomy and Physiology II

A one-semester course; four credit hours. A continuation of Anatomy and Physiology I integrating genetics and embryology to provide a basic understanding of the principles of heredity, and the processes of foetal growth and development. Three one-hour lectures and one two-hour laboratory period per week.

BI5551 Genetics

A one-semester course; four credit hours. The lectures present the fundamental Mendelian principles and the exploration of more recent discoveries, including DNA molecule and the operon theory of micro-organisms, higher plants and animals. New concepts of gene mutation and gene action are considered. Practical exercises are used to illustrate the principles. Three one-hour lectures and one two-hour laboratory period per week.

Prerequisite: One year of introductory biological subjects at the college level and permission of the instructor.

BI5553 Microbiology

A one-semester course; four credit hours. The biology of bacteria and micro-organisms is studied. Laboratory work emphasizes the sterile technique. Immunology is discussed. Three one-hour lectures and one three-hour laboratory period per week.

Prerequisite: One year of introductory biological subjects at the college level and permission of the instructor.

BI5611 Biology (Nursing Home/Small Hospital Management)

A one-semester course; four credit hours. Communicable diseases and general principles of physiology, genetics, and evolution are studied. The relationships of plants and animals to man are emphasized. Three one-hour lectures and one two-hour laboratory period per week.

CH5501-CH5502 General Chemistry I and II

A two-semester course; four credit hours per semester. First semester deals with physical chemistry; second semester with inorganic chemistry and an introduction to organic chemistry. The study of the principles of chemistry by a reliance on the measurement and mathematical treatment of chemical units. The application of these units to the interaction of chemical substances under mechanical, thermal and electrical changes as exemplified by considering the combinations by weight, the gas laws, electro-chemistry and chemical equilibrium in gaseous and solution reactions. Three class hours and one three-hour laboratory period per week.

CH5502 Introductory Chemistry I

A one-semester course; four credit hours. The course covers the basic understanding of atomic structure of the elements, periodic table and radioactivity. The study of solid, liquid and gaseous states of matter is undertaken. Three one-hour lectures and one three-hour laboratory period per week.

CH5504 Introductory Chemistry II

A one-semester course; four credit hours. The course covers the study of solutions, acids, bases and neutralization. The application of physical chemical theory to inorganic chemistry. A brief review of organic chemistry is undertaken with special emphasis on how this aspect of chemistry relates to biological systems. Three one-hour lectures and one three-hour laboratory period per week.

CT6601 Basic Computing Machines

A one-semester course; three credit hours. The evolution of data processing, the relationship to job organization, the development of a data processing system, in-put and out-put media, internal processing, detailed coverage of storage media and fundamental programming techniques. Three one-hour lectures per week.

CT6611 Unit Record Equipment

A one-semester course; four credit hours. Unit record equipment is studied both as an independent system and an off-line aid to the use of the computer. Punch card system, the unit record, machine functions, card punch interpreter, sorter, reproducing punch and collator. Three one-hour lectures and one two-hour laboratory period per week.

CT6622 Scientific Programming

A one-semester course; four credit hours. A comprehensive study of FORTRAN and/or equivalent programming language with related mathematics. Three one-hour lectures and one two-hour laboratory period per week.

CT6631 Introduction to Data Processing

A one-semester course; three credit hours. Data processing from manual systems to computers, developments in the field, the equipment involved, how the equipment is used, how it works, and the applications of data processing systems. Develops understandings preparing students to cope with the computer phenomenon as it relates to their field, or to further develop competency in machine operation or computer programming. Three class hours per week.

CT6651 Assembly Language Programming

A one-semester course; four credit hours. A thorough study of the absolute machine language and the assembler for the computer on campus. Three one-hour lectures and one two-hour laboratory period per week.

CT6652 Business Programming

A one-semester course; four credit hours. A detailed study of COBOL and/or equivalent programming language with applications. Three one-hour lectures and one two-hour laboratory period per week.

CT6676 Systems Development and Design

A one-semester course; four credit hours. Effective use of data processing equipment in meeting the needs of business. The approach, requirements of the systems, developing the solution, data and system control, evaluation and finalizing of the system, and system implementation. Three one-hour lectures and one two-hour laboratory period per week.

CT6678 Advanced Computing and Programming Systems

A one-semester course; four credit hours. Basic concepts of programming systems, assemblers and compilers, report generators, utility programs, data scheduling systems, sort-merges, monitors and high level languages. Three one-hour lectures and one three-hour laboratory period per week.

EC3311 Principles of Economics I

A one-semester course; three credit hours. Introduction to macro-economic analysis and policy. An examination of the foundation and nature of economic principles as they apply to national output, money and banking, and monetary and fiscal policy. Course also focuses upon the problems of employment, inflation, economic growth as illuminated by modern national income analysis. Three class hours per week.

EC3312 Principles of Economics II

A one-semester course; three credit hours. Introduction to micro-economics. This semester centers upon the functioning of individual markets and their effectiveness for resource allocation. Encludes price and production theory, the distribution of income, comparative economic systems, international trade, and the theory of household behavior. Three class hours per week.

Prerequisite: EC3311

EC3652 Survey of Economics

A one-semester course; three credit hours. A non-technical survey of current economic problems. Background of economic concepts and terminology. Some focus on comparative economic systems. Not recommended for transfer students. Three class hours per week.

**EN301 Remedial Reading I

A one-semester course; three credit hours. The course is designed to assist students with the essential elements of the reading process and the development of effective academic skills. Reading, like learning, is regarded as a continuing process. Thus as a student reaches new levels of maturity, demands increase and become more rigorous. The student needs to become aware of his strengths and weaknesses in skills which can contribute to good reading and learning. Diagnostic testing materials are used in the course for this purpose (e.g., The Nelson Denny Reading Test, The California Test of Reading Achievement, and the California Phonics Survey). Different forms of these tests are administered at the beginning and end of the semester. Three class hours per week.

EN0101 Journalism I

A one-semester course; three credit hours. To be offered both semesters. The course will analyze and compare current newspapers and magazines, and will emphasize newswriting, reporting, copy editing, and layout. Knowledge of typing is recommended. Three class hours per week.

EN0121 Creative Writing

A one-semester course; three credit hours. A seminar in writing beyond the freshman level, especially recommended for English majors, prospective teachers, and students who have exempted Freshman English. The art of various types of imaginative literature is ex-

**Courses offered in the Discovery Program only.

amed as a guide to the development of individual style, with emphasis on writing practice and group evaluation. Three class hours per week.

Prerequisites: EN4401 and EN4402 or permission of the instructor.

EN1120 Introduction to the Theatre

A one-semester course; three credit hours. An introductory course which will survey the development and techniques of modern drama. Instruction will be given in acting, directing and the technical aspects of play production. Three class hours per week.

EN3011 Reading Improvement

A one-semester course; no credit hours. This course is designed to aid students in the overall improvement of their verbal skills. Special attention will be paid to increasing skill in speed and comprehension of reading. The course is structured to provide a flexible and individualized approach to reading skill improvement, vocabulary building and critical reading. Three class hours per week.

**EN4311 Communications I

A one-semester course; three credit hours. A writing and reading course which is closely related to Humanities I. The origin of language, social aspects of language, presymbolic and symbolic language, and social control through language will be studied as they relate to man's biological and social nature. Writing and reading assignments will be inter-related with Humanities I.

EN4401-EN4402 English Composition I and II

A two-semester course; three credit hours per semester. Designed to develop lucid, effective written expression. Grammar, syntax and punctuation are reviewed. Stressed are special techniques in expression and the development of logical thinking to enable the student to organize, outline and express his thoughts in written form at various levels. Required of all students. Three class hours per week.

EN4403 Advanced Composition

A one-semester course; three credit hours. A seminar in writing beyond the freshman level, designed for students seriously interested in writing. Types of both non-fiction and fiction will be examined as guides in the development of writing style. Three class hours per week.

Prerequisites: EN4401 and EN4402 or permission of the instructor.

** Courses offered in the Discovery Program only.

EN4676 Technical Writing

A one-semester course; three credit hours. Engineering and scientific report writing. General inductive exposition with emphasis upon research writing, industrial reports and graphic techniques. Three class hours per week.

Prerequisites: EN4401 and EN4402

EN8011 Speech

A one-semester course; three credit hours. Instruction and practice in skills essential to effective oral communication. The course includes organization, presentation and audience analysis as well as instruction in diction, volume and posture. Three class hours per week.

EN8012 Oral Interpretation

A one-semester course; three credit hours. Designed to present the various techniques in effective oral reading. Stress is placed on vocal flexibility, imagery, and emotional involvement. A wide range of dramatic literature will be used. Three class hours per week.

Prerequisites: EN8011 and permission of the instructor.

EN8013 Skill and Motivation Development

A one-semester course; no credit hours. A preliminary course, offered in the Summer Session, designed to increase an incoming student's awareness of the skills and mechanics necessary for the college experience. The course meets five days a week during Summer Session.

EN8851-EN8852 Masters of American Literature

A two-semester course; three credit hours per semester. A study of the most important American novelists, poets and belle-lettrists from 1850 to the present. The emphasis is on the reading of works in their entirety, with depth of reading as well as catholicity being the objective. Typical authors who will form the subject of the course: Frost, Eliot, Hemingway, Faulkner, Salinger, Sinclair Lewis, Dreiser, Crane, Mark Twain, Melville, Hawthorne. Three class hours per week.

EN8853-EN8854 Masters of British Literature

A two-semester course; three credit hours per semester. A study of the major works of selected English poets, dramatists and prose writers, with historical and literary background, will be directed through lectures and prescribed reading, with special exercises in interpretation and criticism. Three class hours per week.

EN8861-EN8862 Masters of Western Literature

A two-semester course; three credit hours per semester. An analysis of the literary masterpieces of the Western tradition, emphasizing the literary philosophy and art of each author. Authors to be considered include Homer, Sophocles, Aeschylus, Plato, Dante, Shakespeare, Milton, Goethe, Dostoevsky, Frost, Eliot, Strindberg, Ibsen, Cervantes, Chekhov, Gogol, Hawthorne, Melville. Variations in selections and authors occur from year to year. Three class hours per week.

EN8865 The Black Experience

A one-semester course; three credit hours. A study of American Black literature that will include a few representative novels and autobiographies and a sample of short stories and poems, mostly by Black writers, to better understand the relationship between literature and life. Three class hours per week.

EN8871 The English Novel

A one-semester course; three credit hours. Reading and discussion of great representative novels from 1740 to the present. Readings to be selected by the instructor. Three class hours per week.

EN8881 The American Novel

A one-semester course; three credit hours. Reading and discussion of significant novels of the nineteenth and twentieth centuries. Included among the authors considered are: Twain, Melville, Hawthorne, Crane, Dreiser, Henry James, Fitzgerald, Steinbeck, Anderson, Hemingway, Salinger, Bellow, Faulkner, Flannery O'Connor. Analysis of form and philosophy. Three class hours per week.

EN8891 Introduction to Poetry

A one-semester course; three credit hours. Designed to acquaint the student with the various forms and scope of poetry. Among the poets considered are Marvell, Shakespeare, Byron, Keats, Poe, Dickinson, Eliot, Pound, Plath, et al. This course is to be an overview of the concept of poetry. Three class hours per week.

EN8893 The Contemporary Novel

A one-semester course; three credit hours. Readings in British, American, French, German, Russian and South American fiction with special emphasis on philosophical and archtypal linkage. Three class hours per week.

ES5501 Meteorology (Earth Science I)

A one-semester course; four credit hours. A basic study of the elements which constitute weather; temperature, pressure, winds, humidity and precipitation. Further study includes global patterns of weather conditions and

the resultant climatic zones. Three one-hour lectures and one two-hour laboratory period per week.

ES5502 Physical Geology (Earth Science II)

A one-semester course; four credit hours. Introduction to landforms and the processes of their formation: erosion by wind, water, ice; beaches and wave action. Further study is accomplished through the use of topographic maps. Additional topics include descriptions of basic rocks and minerals, volcanism, mountain building and crustal movement. Three one-hour lectures and one two-hour laboratory period per week.

Graphics

A one-semester course; two credit hours. This course stresses communication by graphical or pictorial means. Lettering, graphics sketching, orthographic projection, auxiliary views, dimensioning, descriptive geometry principles are topics covered. Neatness is emphasized throughout. One class hour and one two-hour laboratory period per week.

ET6611 D.C. Circuits

A one-semester course; four credit hours. Introduction to the analysis of electric circuits using D.C. sources. Applications of Kirchoff's Voltage and Current Laws, superposition, loop analysis, modal analysis and Thevenin's Theorem. Three class hours and one three-hour laboratory period per week.

ET6612 A.C. Circuits

A one-semester course; four credit hours. Extension of the theorems developed in ET6611 as they apply to circuits excited by sinusoidal sources. Energy considerations, storage of energy, RMS determinations and transformers. Three class hours and one three-hour laboratory period per week.

Prerequisite: ET6611

ET6651 Engineering Mechanics I

A one semester course; three credit hours. Development of fundamental concepts of mechanics such as vectors, forces and moments. Detailed treatment of free body diagrams and their application to force systems. Laws of static equilibrium, friction forces, first and second moments, and problems involving various structures and machine parts. Three class hours per week.

ET6652 Engineering Mechanics II

A one-semester course; three credit hours. Basic laws of kinematics of particles and rigid bodies involving linear, angular, relative and absolute motion. Newton's Laws and their application to the kinematics of rigid bodies in

translation, rotation and plane motion; and the principles of work, kinetic energy, impulse and momentum. Three class hours per week.

Prerequisite: ET6651

ET6653 Advanced Circuits

A one-semester course; four credit hours. Study of the behavior of electric circuits excited by non-linear sources. Fourier series, pulse circuits, and non-linear elements. Three class hours and one three-hour laboratory period per week.

Prerequisite: ET6612

ET6655 Electrical Measurements

A one-semester course; four credit hours. Study of the problems in precise measurements of the fundamental parameters of voltage, current, velocity, acceleration, displacement, time and events per unity time. Emphasis will be on usage and limitations of current equipment. Three class hours and one three-hour laboratory period per week.

Prerequisite: ET6612

ET6661 Networks I

A one-semester course; four credit hours. Introduction to general network solutions employing mathematical models and topology. Emphasis on steady state network solutions using Kirchoff's Laws, Thevenin's Theorem, superposition theorem, loop and modal analysis. Three class hours and one three-hour laboratory period per week.

ET6662 Networks II

A one-semester course; four credit hours. Study of electrical networks under transient conditions. Use of singularity functions, pole zero plots and Fourier Series solutions are included. Three class hours and one three-hour laboratory period per week.

Prerequisite: ET6661

ET6682 Applied Industrial Electronics

A one-semester course; four credit hours. Introduction to thyatron speed control devices, power rectification, induction heaters, synchro systems, servo motors, switching circuits, programmed machine control and other industrial devices. Three class hours and one three-hour laboratory period per week.

Prerequisites: ET6653 and ET6687

ET6687 Electronics I

A one-semester course; five credit hours. Electron emis-

sion, electron ballistics, characteristics of vacuum tubes, application of network theory, electronic circuits, rectifiers, single stage amplifiers, R-C coupled and tuned amplifiers, and push-pull operation. Four class hours and one three-hour laboratory period per week.

Prerequisite: ET6662 and MA5508

ET6688 Electronics II

A one-semester course; five credit hours. Continuation of ET6687. Material covers feedback amplifiers, gas-filled tubes, oscillators, modulation and demodulation. Introduction to transistors and their associated circuitry is included. Four class hours and one three-hour laboratory period per week.

Prerequisite: ET6687

ET6690 Semiconductor Circuits

A one-semester course; four credit hours. Semi-conductor physics, diodes, avalanche and zener diodes, temperature stabilization, transistor operation; four terminal network theory utilizing α , γ , h , g parameters, a-c equivalent circuit analysis, series and shunt feed back, power amplifiers are studied. Practical experience in measurement and design and analysis of semiconductor circuits in the laboratory. Three class hours and one three-hour laboratory period per week.

Prerequisite: Basic understanding of networks and electronics.

FA7081 Analysis of Visual Works of Art

A one-semester course; three credit hours. Discussion and evaluation of visual works of art with special emphasis on painting. The class will deal with such questions as: What is Art? What is the role of Beauty in the definition of Art? How does one evaluate a work of Art? What is Creative Process? Who is the Creative Person? Three class hours per week.

FA7082 Historical Survey of Visual Ideas

A one-semester course; three credit hours. Discussion and evaluation of visual works of art from pre-history to present day. While the first semester dealt with general concepts of art as related to all works of art, this course will place emphasis on the unique contribution of individual cultures in the development of the western world. Three class hours per week.

Prerequisite: FA7081 or permission of instructor.

FA7083 Drawing I

A one-semester course; three credit hours. Course will consider drawing as a means of inquiry into the nature of reality and the "language of vision". Emphasis will be placed on the individual's personal response to experience as explored through the various drawing media. The course will be structured so that the student will better understand the relationship between what the eye sees and what the hand forms. Three two-hour contact sessions per week.

FA7084 Drawing II

A one-semester course; three credit hours. Rather than considering the elements of line, point, texture, pattern, space, form, etc. in isolation, the course will concentrate on bringing these together into more complex structures and compositions. The student will be expected to complete at least seven different projects in the course of the semester, each one placing emphasis on a separate aspect of drawing. Three two-hour contact sessions per week.

FA7085 Painting I

A one-semester course; three credit hours. The course will consider painting as a means of understanding and translating the experiences of the individual into concrete form through various techniques. Emphasis will be placed on finding the most appropriate means for the particular expression of the individual. Three two-hour contact sessions per week.

FA7086 Painting II

A one-semester course; three credit hours. The course will place more emphasis on the technical nature of painting in relation to preparing canvass, color mixing, etc. Greater stress on role of structure and composition within a work. The student will be expected to complete at least five different projects in the course of the semester, placing special emphasis on one aspect of painting. Three two-hour contact sessions per week.

FA7091 Music Appreciation

A one-semester course; three credit hours. No previous training in music is required. The course is intended for the greater understanding and enjoyment of music. Emphasis is placed on musical style and historical background evident in the works of the great composers. Other compositions from the Baroque period to the present day are studied. Listening assignments are included. Three class hours per week.

FI3652 Business Finance

A one-semester course; three credit hours. Principles and practices of business finance. Short and long term sources of funds, management of financial assets, capital requirements, alternative forms of financing, and the capital market. Some use of case study method. Three class hours per week.

FI6651 Principles of Insurance

A one-semester course; three credit hours. Study of the principles of risk management and how insurance handles risk. The concept of risk management is outlined. Insurance coverages for the following are studied: property, liability, life and health. Three class hours per week.

FI6653 Credits and Collections

A one-semester course; three credit hours. Study of the credit function in business. Subjects covered include the credit risk, credit instruments, consumer credit, sources of credit information, retail credit and collection methods. Three class hours per week.

FI6663 Principles of Real Estate

A one-semester course; three credit hours. Survey of the various areas of real estate practice and the principles involved in the purchase, valuation, and selling of real estate. Three class hours per week.

FR4401-FR4402 Introductory French I and II

A two-semester course; three credit hours per semester. For students who have not completed two years of secondary school French or the equivalent as determined by the College. An introduction to the basic grammatical patterns of French. Speaking, reading and writing in the French language. Three class hours per week.

FR4451-FR4452 Intermediate French I and II

A two-semester course; three credit hours per semester. For students who have completed two or more years of secondary school French or the equivalent as determined by the College, or who complete Introductory French I and II successfully at the College. A continued study of French 4401-4402 language skills, emphasizing the development of reading ability. Three class hours per week.

FR8851 Masterpieces of French Literature

A one-semester course; three credit hours. At least one representative work from each major literary period will be read in French. Three class hours per week.

GE9511 Principles of Geography

A one-semester course; three credit hours. A systematic study of the earth's physical and social patterns. Types and uses of maps, the earth as a planet, the atmosphere, weather and climate, topography and its development, resources and economic activities. Three class hours per week.

GE9512 World Regional Geography

A one-semester course; three credit hours. Major world regions and political units. A survey of nations in terms of human activities and conditions as they are related to the earth's physical features. Natural and cultural environments of man are focussed on political units. Three class hours per week.

Prerequisite: GE8851

GM4401-GM4402 Introductory German I and II

A two-semester course; three credit hours per semester. For students who have not completed two years of secondary school German or the equivalent as determined by the College. Audio-lingual emphasis. Introduction to grammatical patterns, reading and writing. Three class hours per week.

GM4451-GM4452 Intermediate German I and II

A two-semester course; three credit hours per semester. For students who have completed two or more years of secondary school German or the equivalent as determined by the College, or who have completed GE4401 and GE4402. A continued study of the language emphasizing the development of reading ability. Three class hours per week.

GV3313 The Federal Government

A one-semester course; three credit hours. The structure, functions, and procedures of the legislative, judicial, and administrative branches of the Federal government will be analyzed within the context of the Constitution of the United States. Emphasis will be given to the structure and function of the various branches of government as well as their interrelationship and the effects of other factors on their functions. Three class hours per week.

GV3314 State and Local Government

A one-semester course; three credit hours. The structure, functions, politics, and problems of state and local government will be dealt with in an attempt to become aware of the functions and operations of state and local government. Special emphasis will be given to the identification and definition of problem areas in an attempt to better understand the issues involved as well as to deal with possible solutions. Three class hours per week.

GV3315 Civil Rights and Liberties

A one-semester course; three credit hours. Course deals with the role of individual rights and liberties in American society within the framework of the United States Constitution. The paradox of freedom is essentially the core around which lectures, discussion and research will be conducted. It is advisable to take this course after having completed a course in federal government. Three class hours per week.

GV3323 Comparative Modern Government

A one-semester course; three credit hours. Comparison and contrast of the spirit and structures of government in France, Great Britain, the Soviet Union, Germany. Three class hours per week.

Prerequisites: HI9901, HI9902, GV3313 and permission of the instructor.

HI9901-HI9902 Western Civilization

A two-semester course; three credit hours per semester. A survey of the major historical developments and trends in Western Civilization from the Ancient Near East and Classical Greece and Rome to modern times, with emphasis on the formation and evolution of the social, political, economic, and cultural institutions of Modern Europe. Three class hours per week.

HI9913-HI9914 U. S. History

A two-semester course; three credit hours per semester. The United States since Colonial times. The development of the social, political and cultural institutions. Three class hours per week.

HI9951 European History 1789-1914

A one-semester course; three credit hours. An analysis of the major political, social, economic, religious, and intellectual movements of Western European Civilization from the French Revolution through the origins of the First World War. Three class hours per week.

Prerequisites: HI9901, HI9902 and permission of the instructor.

HI9952 European History 1914-1965

A one-semester course; three credit hours. Study of the major social, political, intellectual, religious and economic developments of the half-century. Primary focus on politics, the nature, conduct and consequences of W.W. I, Paris Peace Settlement, search for collective security, depression and the rise of totalitarianism,

causes, conduct and results of W.W. II, cold war, the end of empire, the search for European unity. Three class hours per week.

Prerequisites: HI9901, HI9902 and permission of the instructor.

HI9953 Far Eastern History

A one-semester course; three credit hours. Survey of the history and civilization of the Orient with major emphasis on China and Japan, the impact of the West, Far Eastern ideas and institutions in the nineteenth and twentieth centuries. Three class hours per week.

Prerequisites: HI9901, HI9902 and permission of the instructor.

HI9955 Minority Groups in America

A one-semester course; three credit hours. Seminar on the contributions and difficulties of religious, racial, ethnic and other minority groups in the pluralistic American society from colonial times to the present. Particular attention will be given to the following groups: Catholic and Jewish, American Indian, Negro and Puerto Rican, and southern European and Oriental. Students will research, write and present individual reports. Three class hours per week.

Prerequisites: HI9913, HI9914 and permission of the instructor.

HS6601 Medical Terminology

A one-semester course; three credit hours. Study of prefixes, suffixes; abbreviations; disease; operative, and drug terms. Also included are terms related to all areas of medical science, hospital service, and the paramedical specialties. Three class hours per week.

**HU3111 Humanities I

A one-semester course; three credit hours. An interdisciplinary focus on man: cosmological, philosophical, biological, sociological, political and ecological. Sequence of topics: Man and the Cosmos, Biological Man, Man in Society, Man the Politician, Man and His Environment. Format: a colloquium involving a natural scientist, a social psychologist, and an historian-political scientist. Three class hours per week.

IT4401-IT4402 Introductory Italian I and II

A two-semester course; three credit hours per semester. For students who have not completed two years of secondary school Italian or the equivalent as determined by

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the College. Audio-lingual emphasis. Introduction to grammatical patterns, reading and writing. Three class hours per week.

IT4451-IT4452 Intermediate Italian I and II

A two-semester course; three credit hours per semester. For students who have completed two or more years of secondary school Italian or the equivalent as determined by the College, or who have completed IT4401 and IT4402. A continued study of the language emphasizing the development of reading ability. Three class hours per week.

***LE3601 Criminal Law

A one-semester course; three credit hours. The substantive law of crimes, including the general and the special parts of the criminal law. Emphasis is placed on analysis of the elements of particular crimes through case study. Three class hours per week.

***LE3602 Law Enforcement Management and Planning

A one-semester course; three credit hours. Consideration of police problems at the administrative level, including coordination of all branches of a police department. An evaluation of line, staff, and auxiliary functions and the interrelationship of each. The purpose, need, and scope of planning in the police operation, including staffing, collection of data and use of data processing. Three class hours per week.

***LE3603 Introduction to Criminal Justice

A one-semester course; three credit hours. A survey of federal, state, county and local law enforcement agencies, their history, development, and modern role within the field of criminal justice. Three class hours per week.

***LE3604 Introduction to Criminology

A one-semester course; three credit hours. A survey of the patterns and evolution of adult criminal and juvenile delinquent behavior analyzed in terms of various theories of such behavior; administration of criminal justice; police, law, courts (including juvenile courts) and prisons. Three class hours per week.

LW6651 Business Law I

A one-semester course; three credit hours. Introduction to law and its development. The law of contracts and its elements. The law of agency and its application to business. Three class hours per week.

*** Courses offered in the Division of Continuing Education only.

LW6652 Business Law II

A one-semester course; three credit hours. A continuation of Business Law I, developing a basic understanding and application of the Uniform Commercial Code involving negotiable instruments, sales, banking, partnerships, corporations, and estates and trusts. Three class hours per week.

Prerequisite: LW6651

**MA501 Fundamentals of Mathematics

A one-semester course; three credit hours. A self-help course taught on a tutorial basis to assist students deficient in the fundamentals of mathematics. Basic level. Five class hours per week.

MA5001 Pre-college Mathematics

A one-semester course; no credit hours. Especially designed to fulfill prerequisites for MA5503. Sets. Sets of numbers. Properties of a field. Solution and graphing of equations and inequalities in one and two variables. Compound statements. Three class hours per week.

MA5503 Finite Mathematics I

A one-semester course; three credit hours. Compound statements. Truth tables. Inference and proof. Set theory, counting and measuring. Mathematical reasoning and mathematical systems. Three class hours per week.

Prerequisite: Two years of high school algebra or MA5001.

MA5504 Finite Mathematics II

A one-semester course; three credit hours. Relations and functions. Permutations and combinations. Probability. Descriptive statistics. Sampling designs. Three class hours per week.

Prerequisite: MA5503

MA5506 Statistics

A one-semester course; three credit hours. Set theory approach to probability. Descriptive statistics. Probability distributions. Sampling. Inferences from statistics. Hypothesis testing. Linear regression and correlation. Three class hours per week.

Prerequisite: MA5503

** Courses offered in the Discovery Program only.

MA5508 Elementary Functions

A one-semester course; three credit hours. Set theory approach to polynomial, rational, algebraic, exponential, logarithmic, and trigonometric functions. Analytic geometry. Three class hours per week.

Prerequisite: MA5503

MA5510 Contemporary Mathematics for Elementary Teachers

A one-semester course; three credit hours. An introductory course designed to help students understand the ideas behind the mathematics needed to be successful teachers in elementary education. Course deals with, and illustrates, the interaction between the arithmetic and geometric aspects, and deals with the broad range of, computational schemes currently used in elementary mathematical education. (MA5503 recommended.)

MA5531 Calculus I (Liberal Arts)

A one-semester course; three credit hours. The integral and derivative. Differential calculus of polynomial and rational functions. Antiderivatives and integrals of polynomials. Logarithms and exponentials. Trigonometric functions. Three class hours per week.

Prerequisite: Four years of high school mathematics or MA5508.

MA5532 Calculus II (Liberal Arts)

A one-semester course; three credit hours. Differential functions: chain rule, methods of integration, implicit and inverse functions. Limits: applications of integration, volume. Theory of curves. Three class hours per week.

Prerequisite: MA5531

MA5611-MA5612 Finite Mathematical Models I and II

A two-semester course; three credit hours per semester. Topics include: logic, set theory, vectors and matrices, probability and Markov chains, linear programming and general theory. Three class hours per week.

MA5613 Mathematics of Finance

A one-semester course; three credit hours. The mathematics used in business transactions. Three class hours per week.

MA5621 Algebra and Trigonometry

A one-semester course; four credit hours. For students enrolled in a technology curriculum. A complete review of algebra. Introduction to trigonometry. Three class hours and two one-hour problem-solving sessions per week.

MA5622 Advanced Algebra and Trigonometry

A one-semester course; four credit hours. For students enrolled in a technology curriculum. Emphasis on the use of algebra, trigonometry and graphics in the solution of technical problems. An introduction to the concepts of rate of change and summation of areas. Three class hours and two one-hour problem-solving sessions per week.

Prerequisite: MA5621

MA5651 Advanced Technical Mathematics I

A one-semester course; four credit hours. For students enrolled in a technology curriculum. Use of mathematics in solving technical problems involving velocity, acceleration, area, volume, maximum and minimum. Four class hours per week.

Prerequisite: MA5622

MA5652 Advanced Technical Mathematics II

A one-semester course; three credit hours. The mathematics of scalar and vector products, solid analytical geometry, partial derivatives, series expansions, De Moivre's Theorem, L'Hospital's Rule, etc. Three class hours per week.

Prerequisite: MA5651 or equivalent.

MA5661 Advanced Trigonometry and Analytic Geometry

A one-semester course; four credit hours. Review of the fundamentals of algebra and trigonometry. Introduction to advanced algebraic concepts, trigonometric identities, basic statistics, complex variables, analytic geometry and the basic forms of differentiation and integration. Three class hours and one two-hour problem-solving session per week.

MA5671 Business Statistics

A one-semester course; three credit hours. The use of statistical methods in the management of business. Three class hours per week.

MA5683 Calculus I (Technical)

A one-semester course; four credit hours. An extension of MA5661 into the field of calculus. Applications of calculus to problems of relative rates, curve tracing, maximum, minimum, area, volume, etc. Four class hours per week.

Prerequisite: MA5652

MA5684 Calculus II (Technical)

A one-semester course; four credit hours. The calculus of scalar and vector products, solid analytical geometry, partial derivatives, series expansions, DeMoivre's Theorem, L'Hospital's Rule, etc. Four class hours per week.

Prerequisite: MA5683

MA5685 Differential Equations

A one-semester course; four credit hours. Fundamentals of ordinary linear differential equations, LaPlace Transforms, numerical methods of solutions, etc. Four class hours per week.

Prerequisite: MA5683

MG6651 Industrial Management

A one-semester course; three credit hours. Overview of manufacturing operations. All aspects of the production function are discussed: capital investment, assembly-line operation, plant location, product design, time study, purchasing and other topics. Three class hours per week.

MG6652 Time and Motion Study

A one-semester course; three credit hours. The course deals with the application of methods improvement and work measurement techniques. The use of the stop watch, work sampling and operations charts in terms of application to standard systems. Three class hours per week.

MG6676 Personnel Management

A one-semester course; three credit hours. Principles and human relations problems involved in the administration of personnel. Topics include job analysis and specification, recruitment, selection and training, job evaluation, supervision of employees, and salary and wage administration and labor relations. Three class hours per week.

MK6678 Principles of Marketing

A one-semester course; three credit hours. Introduction to marketing with emphasis placed on the basic functions and the channels of distribution. The consumer, the market area, and the problems and policies of pricing the product. Three class hours per week.

MK6679 Advertising

A one-semester course; three credit hours. Analysis of buying motives and the development of various advertising appeals. Planning, budgeting and testing of phases of the program and the several advertising media. Three class hours per week.

MK6680 Retailing

A one-semester course; three credit hours. Basic elements of retail merchandising. Types and organization of retail outlets. Buying, pricing, dollar and unit stock control, sales promotion, and expense budgets. Three class hours per week.

MK6681 Salesmanship

A one-semester course; three credit hours. Fundamentals of salesmanship by studying the behavioral aspects of the persuasion process; a systematic approach to selling which the student can use to develop the techniques which fit his own personality and particular situation. Three class hours per week.

MR6601 Medical Record Science I

A one-semester course; three credit hours. A brief study of the history of medical records, hospitals, and medicine. An analysis is made of professional ethics, and personal conduct required of medical record personnel. Study is also made of the uses and value of the medical record, and responsibility for the component parts of the medical record, quantitative and qualitative analysis of records, and methods and techniques to facilitate completion of records. The importance of medical record personnel as members of the health-care team is emphasized. Two class hours and one two-hour laboratory period per week.

MA6602 Medical Record Science II

A one-semester course; three credit hours. Deals with the study of basic principles of compiling statistics for hospitals and other medical facilities. Preparation of reports includes the daily census; analysis of hospital services; monthly, annual and special reports. Methods for recording vital statistics are included. Basic principles in the classification of diseases and operations according to Standard Nomenclature of Diseases and Operations and the International Classification of Diseases, Adapted. Also included are methods of maintaining the physicians' index; birth, death and emergency registers; and special types of disease registers. The techniques of assisting medical staff in research projects are included. Two class hours and one two-hour laboratory period per week.

MR6651 Medical Record Science III

A one-semester course; three credit hours. Course includes the study of principles of law as related to patient care and medical records; study of medical staff structure within the hospital; study of health accrediting agencies; and the study and practice of medical transcription. Two class hours and one two-hour laboratory period per week.

MR6611 Directed Practice I (Medical Record)

A one-semester course; two credit hours. Directed practice experience in the following areas: admitting procedures, circulation and control of medical records, discharge procedures. One hundred and twenty class hours for the semester.

MR6652 Medical Record Seminar

A one-semester course; one credit hour. This is a seminar in problem analysis and action in the operation of a medical records department of a hospital or other type of medical facility. The course is designed for students in the final semester and will provide a means of coordinating the final directed practice. One class hour per week.

MR6660 Directed Practice II (Medical Record)

A one-semester course; four credit hours. Directed practice experience in the following areas: statistics, Coding and Indexing Transcription of discharge summaries and operations. Two hundred and forty class hours for the semester; sixty hours of which is transcription taught on campus.

MR6666 Directed Practice III (Medical Record)

A one-semester course; three credit hours. Directed practice experience in the following areas: Transcription, Release of Medical Information, Secretarial and Management experience. One hundred and eighty hours for the semester.

NH6613 Principles of Nursing Home Administration I

A one-semester course; three credit hours. The functioning, forms and financing of nursing homes. Approached from a general overview of community health care with an emphasis on the role of nursing homes in our society. Exploring the complex of activities found in the institution; the administration of food services, patient care, personnel, buildings, and long-term care. Three class hours per week.

NH6614 Principles of Nursing Home Administration II

A one-semester course; three credit hours. The history and current character of institutional care. Organizational structure and functions of typical nursing homes. Long-term care facilities, homes of the aged, and government facilities. Three class hours per week.

NH6622 Food Services and Nutrition

A one-semester course; three credit hours. Survey of food quality and services. Study of adequate facilities and equipment for the proper storage, preparation and

serving of food for residents and employees. Familiarity with dietary needs of both groups, and understanding of garbage disposal facilities and procedures. Three class hours per week.

NH6651 Nursing Home Plant Planning

A one-semester course; three credit hours. Planning, designing and constructing nursing home and small hospital plants. Discussion of sites, materials and contractual processes. Procurement of supplies and equipment. Three class hours per week.

NH6652 Medico-Legal Standards

A one-semester course; three credit hours. Study of the rules and regulations administered by the State Department of Public Health. Survey of state and federal requirements in terms of liability and responsibility of nursing homes relative to patients and employees. Three class hours per week.

NH6680 Internship (Nursing Home Administration)

A one-semester course; four credit hours. Taken during the final semester of the program. Work experience under a qualified instructor, periodic seminars with College staff, periodic written progress reports, and a written major report by the students. Internship must be taken at an approved institution by arrangement. Four laboratory hours per week.

NH6682 Principles of Nursing Home Finance

A one-semester course; three credit hours. Study of health care economics pertaining to specific aspects of health care, the costs and expenditures involved, health prepayments, insurance programs, the impact of social and economic factors on the financial structure of the nursing home. Three class hours per week.

NH6684 Principles of Medical Records

A one-semester course; three credit hours. Study of medical history records, report preparation, coding, indexing procedures, ethics, methods of securing and preserving medical records, and medical record practices and procedures. Three class hours per week.

NS6601 Nursing I

A one-semester course; seven credit hours. Course is designed to assist the student to adjust to nursing by developing first an understanding of normal health needs and the basic concepts and skills necessary to render safe and effective patient-side nursing care. Basic mental health concepts and communication skills, nutrition, pharmacology, and the preventive aspect of rehabilitation are introduced. Selected clinical experience. Three class hours and four three-hour laboratory periods per week.

NS6602 Nursing II

A one-semester course; seven credit hours. Course is designed to assist the student to develop an understanding of the knowledge, skills, and attitudes necessary to afford effective care of patients throughout the maternity cycle, the newborn infant, the child from infancy to maturity, and the pediatric patient. Growth and development is included. Diet therapy and pharmacology are integrated. Medical asepsis and the therapeutic aspect of rehabilitation are introduced. Selected clinical experience. Three class hours and four three-hour laboratory periods per week.

Prerequisite: NS6601

NS6651 Nursing III

A one-semester course; eight credit hours. Course provides a study of the patient with physical or mental illness and the nursing knowledge and skills necessary to their effective nursing care. Surgical asepsis, emergency and disaster nursing, and the restorative aspects of rehabilitation are introduced. Communications skills and inter-personal relationships are emphasized. Related diet therapy and pharmacology are integrated. Selected clinical experience. Four class hours and four three-hour laboratory periods per week.

Prerequisite: NS6602

NS6652 Nursing IV

A one-semester course; ten credit hours. Course is designed to develop those understandings and skills necessary to the effective nursing care of patients with major medical-surgical problems. Geriatric nursing and the team approach to nursing are introduced. Selected clinical experience will demonstrate progressive nursing responsibility. Four class hours and six three-hour laboratory periods per week.

Prerequisite: NS6651

NS6682 Seminar on Nursing

A one-semester course; three credit hours. Course is designed to provide students with an appreciation of the historical development of nursing, the present and future trends in nursing education and practice, and the role of nursing organizations. Opportunities for, as well as problems and responsibilities of, the registered nurse are discussed. Three class hours per week.

Prerequisite: NS6651

PH1101 Introduction to Philosophy I

A one-semester course; three credit hours. The aims, nature and problems of philosophy and its methods of inquiry and explanation, such as intuitionism, rationalism, empiricism, and pragmatism. The sources, limitations and validity of knowledge, with particular attention to the positions of Locke, Berkeley, Hume and Kant. Concludes with examination of basic ethical theories. Three class hours per week.

PH1102 Introduction to Philosophy II

A one-semester course; three credit hours. Critical analysis of fundamental assumptions, teachings and theoretical and practical implications of the major schools of philosophy, with particular attention to views about God, man, nature and society. Three class hours per week.

Introduction to Logic

A one-semester course; three credit hours. Course will inquire into the nature of critical thinking. Such topics as the functions of language, experimental truth and logical validity, the structure of deductive arguments, and basic inductive methods will be considered. Three class hours per week.

PI5501-PI5502 Physics I and II

A two-semester course; four credit hours per semester. Intended for liberal arts students and some science majors. The course will examine the elements of mechanics, sound, heat, electricity, magnetism and light. Plane trigonometry and algebra will be used. Three class hours and one three-hour laboratory period per week.

Prerequisite: One year of college mathematics.

PI5621 Applied Physics I

A one-semester course; four credit hours. Fundamentals of mechanical motion using algebra and graphical solutions. Principles of heat transfer, wave motion, vibration and sound. Basic fluid mechanics. Three class hours and one three-hour laboratory period per week.

PI5622 Applied Physics II

A one-semester course; four credit hours. Fundamentals of electricity, magnetism, and electrochemical effects. Electromagnetic induction and magnetic properties. Introduction to physical optics, lenses, mirrors and optical instruments. Three class hours and one three-hour laboratory period per week.

Prerequisite: PI5621

PI5623 Engineering Physics I

A one-semester course; four credit hours. To be taken concurrently with MA5621. The principles of mechanics, including composition and resolution of vectors, statics, moments, rectilinear motion, Newton's second law, motion of a projectile, work and energy, impulse and momentum, circular motion, rotational kinematics and dynamics, elasticity, harmonic motion. Three class hours and one three-hour laboratory period per week.

PI5624 Engineering Physics II

A one-semester course; four credit hours. To be taken concurrently with MA5622. Principles of electricity and magnetism. Coulomb's Law, potential, D.C. circuits, the magnetic field, galvanometers, ammeters, voltmeters, wattmeters, the D.C. motor, magnetic field of a current and of a moving charge, induced electromotive force, capacitance and inductance, magnetic properties of matter. Three class hours and one three-hour laboratory period per week.

Prerequisite: PI5501

PI5651 Engineering Physics III

A one-semester course; four credit hours. To be taken concurrently with MA5683. Heat, sound, and optics, including the following: thermometry, quantity of heat, change of state, work and heat; heat transfer, thermal properties of matter, the first and second law of thermodynamics, wave motion, vibrating systems; acoustical phenomena; the nature and propagation of light; reflection and refraction at a single surface, lenses and lens aberration; optical instruments; illumination, color, and polarized light. Three class hours and one three-hour laboratory period per week.

PS1101 Introduction to Psychology

A one-semester course; three credit hours. Survey of the more important areas of psychology. Study of behavior, including maturation and development, emotions, motivation, learning, intelligence, conflict, psychotherapy and perception. Three class hours per week.

PS1151 Child Psychology

A one-semester course; three credit hours. Study of child development from the behavioral aspect. Motor, speech, social, emotional and play development are emphasized. A research paper on a particular kind of child or on one age level is required. Three class hours per week.

Prerequisite: PS1101

PS1152 Adolescent Psychology

A one-semester course; three credit hours. Study of adolescent development from the point of view of both the adult and the adolescent. The emotional, social, intellectual and other phases of development are considered. Three class hours per week.

Prerequisite: PS1101

PS1153 Educational Psychology

A one-semester course; three credit hours. Major psychological factors in human development related to problems in the school situation; teacher's role in school motivation; conceptual learning, problem solving and the development of emotional behavior, attitudes and values; learning of skills; retention and transfer; and measurement of student abilities and achievement. Recommended for students contemplating future study in education or psychology. Three class hours per week.

Prerequisite: PS1101

PS1351 Social Psychology

A one-semester course; three credit hours. The social matrix of individual behavior. The shaping of personality by face-to-face relations with one other, two others or a group. Why behavior is different in a group. Prejudices as perception. Group influence on masculine and feminine identity. The group and the search for meaning. Three class hours per week.

Prerequisite: PS1101

PS1651 Industrial Psychology

A one-semester course; three credit hours. An introduction to problems of human relations in business and industry. Such problems as selection, placement, conflict, supervision, motivation and cooperation will be examined. The case method will be used extensively. Three class hours per week.

PS1751 Abnormal Psychology

A one-semester course; three credit hours. The study of the etiology, treatment and prevention of mental disorders. Includes study of functional and organic psychoses, psychoneuroses, and borderline maladjustments. Three class hours per week.

Prerequisite: PS1101

PS6551 Gerontology

A one-semester course; three credit hours. The unique physical and mental characteristics and problems of the elderly with which administration of nursing home facilities should be familiar. Three class hours per week.

RT6601 Respiratory Therapy I

A one-semester course; three credit hours. Overview of the field of respiratory therapy with emphasis on basic knowledge of the historical aspects of oxygen, its manufacture, governmental regulations, safety precautions, flow regulation devices with indications and procedures for the use and administration of oxygen equipment. Three class hours per week.

RT6602 Respiratory Therapy II

A one-semester course; three credit hours. Theory and procedures of humidity and aerosol therapy, including an investigation into the devices currently employed in the field, and a survey of aerosol agents, and the pharmacological theory involved. Three class hours per week.

RT6613 Respiratory Therapy III

A one-semester course; four credit hours. Ventilation and emergency therapy, including all types of ventilators and their classification, units for home use, and the principles and procedures of cardio-pulmonary resuscitation. Three class hours and one three-hour laboratory period per week.

RT6614 Respiratory Therapy IV

A one-semester course; four credit hours. Care and maintenance of equipment: cleaning and sterilization, organization and administration of an inhalation therapy service and a consideration of ethics as applied to the role of the inhalation therapist in working with the patient, the nurse and the physician. Three class hours and one three-hour laboratory period per week.

RT6615 Respiratory Physiology

A one-semester course; three credit hours. Course will present an in-depth analysis of pulmonary circulation and gas diffusion; transport of oxygen and carbon dioxide; response to hyperoxygen ions; as well as clinical manifestations of pulmonary disease. Three class hours per week.

RT6616 Clinical Spirometry

A one-semester course; three credit hours. Course will cover evaluation and interpretation of vital capacity,

maximal breathing capacity and timed vital capacity as applied to analysis and recognition of obstructive and restrictive lung disease. Three class hours per week.

RT6617 pH and Blood Gas Analysis

A one-semester course; three credit hours. Comprehensive study of Blood Gas Parameters, with special emphasis on a meaningful interpretation of results as applied to Respiratory Intensive Care. The course will culminate in a one-week equipment trouble-shooting seminar at Instrumentation Laboratory, Lexington, Massachusetts. Three class hours per week.

RT6618 Respiratory Intensive Care

A one-semester course; four credit hours. Emphasis will be placed on mechanical competence with both volume and pressure limited ventilators, trouble-shooting all equipment, including accessory apparatus, and the development of confidence and clinical acumen when dealing with critical situations. Three class hours and one three-hour laboratory period per week.

RT6621-RT6622 Seminars I and II (Inhalation Therapy)

A two-semester course; three credit hours per semester. An evaluation and discussion of current topics in respiratory therapy, including the presentation of original papers. Three class hours per week.

SC5011 Man and His Environment

A one-semester course; three credit hours. Study of the ecology of the ape, primitive man, and the cultured and urbanised man of today. The study of the progressive deterioration of man's balance with the rest of nature, showing the way man has to change his psychological attitudes in order to implement and develop new technical solutions. The study of the technical solutions necessary to solve the three major problems of today: overpopulation, inadequate resources, and pollution. Three class hours per week.

SC5511-SC5512 Physical Science I and II

A two-semester course; four credit hours per semester. An integrated course which considers the basic principles of the physical universe, including the study of the composition of substances, the atmosphere, synthetics, the earth, and the universe, in an effort to develop an understanding of the relationship of the sciences to everyday life. Three class hours and one two-hour laboratory period per week.

SC5503 Integrated Science I

A one-semester course; four credit hours. Emphasis is placed on chemistry, physics and microbiology. The human body as a whole, the skin, the skeletal system, and the muscular system are studied. Three class hours and one three-hour laboratory period per week.

SC5504 Integrated Science II

A one-semester course; four credit hours. Emphasis is placed on the bodily systems, metabolism, nutrition, reproduction, genetics, the eye, and the ear in particular. Three class hours and one three-hour laboratory period per week.

SH6621 Shorthand I

A one-semester course; four credit hours. Introduction to theory of Gregg shorthand. Rapid reading of shorthand plates. Development of legible and fluent shorthand writing style. Dictation from prepared material. Students who have completed two or more years of high school shorthand may be exempted from this course. Five class hours per week.

SH6622 Shorthand II

A one-semester course; four credit hours. Continuation of the study of shorthand theory. Correlation of shorthand with the mechanics of English sentence structure, punctuation and spelling. Development of the ability to take shorthand dictation on new material at progressively higher levels of speed. Required of all freshmen secretarial majors. Five class hours per week.

SH6641 Technical Stenography

A one-semester course; three credit hours. Development of a technical shorthand vocabulary. Technical terminology with emphasis on missiles, electronics, physics, chemistry, data processing, engineering and mathematics. Three class hours per week.

SH6671 Shorthand and Transcription I

A one-semester course; three credit hours. Review of shorthand theory. Development of shorthand vocabulary in business and technical terminology. Intensive dictation program at higher speed levels. Development of transcription skills at the typewriter. Five class hours per week.

SH6672 Shorthand and Transcription II

A one-semester course; three credit hours. Dictation at expert speed levels. Office style dictation. Civil service preparation. Advanced transcription problems. Emphasis on transcription rates. Dictation and composition at the typewriter. Five class hours per week.

SH6677 Medical Stenography

A one-semester course; three credit hours. Development of a basic medical vocabulary in shorthand. Study of medical terminology. Light case histories and other basic medical dictation. Three class hours per week. (This course is offered when demand is sufficient.)

SH6679 Legal Stenography

A one-semester course; three credit hours. Course is for the advanced shorthand student. It provides instructional material as well as legal shorthand terminology. Also takes up the background of law and law office procedures, and skill building materials in dictation. Three class hours per week.

SH6691 Legal Dictation and Transcription

A one-semester course; three credit hours. Preparation of briefs from dictation. Maintenance of a law library and other law office procedures. Three class hours per week.

SK6651 Office Machines

A one-semester course; three credit hours. Modern office technology. Study and development of skill in reproducing and duplicating machines, adding machines, and calculators. Intensive skill development on transcribing machines. Terminology and theory of data processing. Laboratory work, lectures, field trips and demonstrations. Three class hours per week.

SL6661 Secretarial Procedures I

A one-semester course; three credit hours. Theory and problems in office and records management, including filing systems, selection and maintenance of office supplies and equipment, dictation and transcription procedures, processing of mail and postal and shipping service. Three class hours per week.

SL6662 Secretarial Procedures II

A one-semester course; three credit hours. Receptionist and telephone techniques, handling travel arrangements. Preparation of business reports, presentation of statistics and graphics, secretarial responsibilities for banking services. Insurance, payroll and tax duties. Three class hours per week.

S03321 Principles of Sociology

A one-semester course; three credit hours. Study of the social order, and of human behavior as motivated and influenced by group membership, and by culture. Analysis of structure and functions of the major social institutions. Three class hours per week.

S03331 Marriage and the Family

A one-semester course; three credit hours. Examination of marriage and the family from a social-psychological point of view. Consideration of such areas of adjustment as emotional, physical, social, financial, religious and legal. Three class hours per week.

Prerequisite: S03321

S03333 Contemporary Social Problems

A one-semester course; three credit hours. Analysis of the origins, extent, and significance of contemporary social problems. The course will be concerned with changes in social patterns and trends, with emphasis on the causes of group disintegration and reorganization. Three class hours per week.

Prerequisite: S03321

SP4401-SP4402 Introductory Spanish I and II

A two-semester course; three credit hours per semester. For students who have not completed two years of high school Spanish or the equivalent as determined by the College. Audio-lingual emphasis. Introduction to grammatical patterns, reading and writing. Three class hours per week.

SP4451-SP4452 Intermediate Spanish I and II

A two-semester course; three credit hours per semester. For students who have completed two or more years of high school Spanish or the equivalent as determined by the College, or who have completed SP4401 and SP4402. A continued study of language skills, emphasizing the development of reading ability. Three class hours per week.

TW6621 Typewriting I

A one-semester course; three credit hours. Development of the touch system of typewriting. Growth of speed and accuracy. Short personal and business letters, centering problems and simple tabulations. Students who have completed one or more years of high school typewriting may be exempted from this course. Five class hours per week.

TW6622 Typewriting II

A one-semester course; three credit hours. Further development of typewriting speed and accuracy. Technique of erasing and the use of carbons. Manuscripts, rough drafts, advanced business letters, typing business forms, and tabulated reports. Five class hours per week.

TW6631 Typewriting III

A one-semester course; three credit hours. Continuation of development of high speed and accuracy levels. Simple typewriting projects. Statistical typing. Five class hours per week.

TW6632 Typewriting IV

A one-semester course; three credit hours. Superior levels of speed and accuracy. Technical typewriting. Advanced typewriting problems similar to those encountered in a variety of business situation. Production typewriting. Five class hours per week.

TW6641 Technical Typewriting

A one semester course; three credit hours. Instruction in technical typing including engineering symbols, mathematical signs, rough drafts, with emphasis on handbooks of a specialized nature. Training in technical secretarial office procedures. Five class hours per week.

THE COLLEGE RESERVES THE RIGHT
TO ADD OR SUBTRACT CURRICULA OR
COURSES. COURSES WHICH WILL BE
OFFERED DURING A GIVEN SEMESTER
IN THE DAY DIVISION OR DIVISION
OF CONTINUING EDUCATION WILL BE
ANNOUNCED AT REGISTRATION TIME.

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